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| 10/684,620 | 10/14/2003 | David James Gemmell | 305218.01 MCS-046-03 | 3767 |

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| EXAMINER | |
|---|---|
| TRAN, TUYETLIEN T | |
| **ART UNIT** | **PAPER NUMBER** |
| 2179 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|---|---|---|
| 3 MONTHS | 02/22/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|---|---|---|---|
| **Office Action Summary** | **Application No.**<br>10/684,620 | **Applicant(s)**<br>GEMMELL ET AL. | |
| | **Examiner**<br>TuyetLien (Lien) T. Tran | **Art Unit**<br>2179 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *28 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27,30 and 34-58* is/are rejected.

7)☒ Claim(s) *28-29, 31-33* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. This action is responsive to the following communication: Amendment filed 12/28/06.

**This action is made final.**

2. Claims 1-58 are pending in the case. Claims 1, 34 and 58 are independent claims. Claims 30 and 58 are the amended claims.

### *Claim Objections*

3. Claim 30 has been amended and therefore the previous objection is withdrawn.

### *Claim Rejections - 35 USC § 101*

4. Applicant's amendment corrects the previous 101 rejection and therefore the rejection is dropped.

### *Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4, 8, 10, 13-14, 16, 18, 22-23, 58 are rejected under 35 U.S.C. 102(e) as being anticipated by Rothmuller et al (Pub No. US 2003/0033296 A1; hereinafter simply referred to as Rothmuller).

As to independent claim 1, Rothmuller disclose:

In a computer system (apparatus for storing, cataloguing, managing, organizing, finding and displaying objects such as digital images, see [0004], lines 1-3) having a user interface (see Fig. 1) including a display (i.e., the computer monitor that display the interface as shown in Fig. 1) and a user interface selection device (i.e., a mouse or keyboard that allows a user to select a command button in the interface of Fig. 1), a process for graphically displaying the results of a search to a user (see [0007]) on said display via an interactive search results window (i.e., image area 100 and timeline 250) in which the user views and filters search results items (i.e., through timeline 250 a user can further filter results item based on the date and time), comprising process actions for:

computing a clustering of the search results items (i.e., digital images, see [0004]) in terms of a user-specified independent variable (i.e., date and time the photos were taken, see [0006]) corresponding to a common attribute (i.e., items have the same file type, digital images) of at least some of the search results to form a plurality of cluster subdivisions each comprising a portion of the search results items within a particular range of the independent variable determined by the clustering (i.e., vertical bar 2000 and vertical bar 2001 of the Timeline 250 as shown in Fig. 3);

displaying a graphic data presentation sector (i.e., bar 2000 of the Timeline 250) in the search results window (i.e., image area 100 and timeline 250) which comprises a series of said cluster subdivisions (i.e., vertical bars 1998-2001) displayed in the order dictated by the independent variable (i.e., items are displayed in date and time order as shown in Timeline 250), wherein each subdivision is visually distinguished from the other subdivisions (i.e., each subdivision is identified by its label such as 1998-2001 or different background colors or pattern) and has a length along the axis of the independent variable proportional to the number of search results items within that subdivision (e.g., the timeline 250 displays a vertical bar graph with bar heights that are representative of the number of photos taken during a given period of time, see [0031]); and

upon the user selecting one of the cluster subdivisions via said selection device (e.g., the user select the month of June, 2001 from timeline 250 as shown in Fig. 3), those search results items associated with the selected subdivision are re-clustered (i.e., the bar graph of June, 2001 is re-clustered into calendar view as shown in Fig. 4) and cluster subdivisions associated with the re-clustered search result items are displayed in the graphic data presentation sector (i.e., two sets of photo were taken on June 8 and June 18, 2001 as shown in Fig. 4) in lieu of the previously displayed higher-order clustering (i.e., label of June 2001), thereby effecting a user specified filtering of the search results (i.e., the user select the month of June, 2001).

As to independent claim 58, Rothmuller disclose:

A computer-readable storage medium having computer-executable instructions (see [0041]) stored thereon for graphically displaying the results of a search to a user (see Fig. 1) on a display device (i.e., the computer monitor that display the interface as shown in Fig. 1) via a search results window (i.e., search criteria as shown in Fig. 1), said computer-executable instructions operable to:

compute a clustering of the search results items (i.e., digital images, see [0004]) in terms of a user-specified independent variable (i.e., date and time the photos were taken, see [0006]) corresponding to a common attribute (i.e., items have the same file type, digital images) of at least some of the search results to form a plurality of cluster subdivisions each comprising a portion of the search results items within a particular range of the independent variable determined by the clustering (i.e., vertical bar 2000 and vertical bar 2001 of the Timeline 250 as shown in Fig. 3); and display a graphic data presentation sector (i.e., histogram bars 1998-2001) in the search results window (i.e., image area 100 and timeline 250) which comprises,

a series of said cluster subdivisions (i.e., vertical bars 1998-2001) displayed in the order dictated by the independent variable (i.e., items are displayed in date and time order as shown in timeline 250), wherein each subdivision is visually distinguished from the other subdivisions (i.e., each subdivision is identified by its label such as 1998-2001 or different background colors or pattern) and has a length along the axis of the independent variable proportional to the number of search results items within that subdivision (e.g., the timeline 250 displays a vertical bar graph with bar heights that are representative of the number of photos taken during a given period of time, see [0031]), and

a histogram of the search results items (i.e., histogram timeline 250 as shown in Fig. 1 and Fig. 3), in terms of the user-specified independent variable (i.e., date and time the photos were taken, see [0006]), displayed over the cluster subdivisions (i.e., histogram bar 1998-2001), wherein the bars of the histogram (i.e., vertical bar 2000-2001 as shown in Fig. 3) each represent a histogram bin corresponding to a particular range (i.e., bar 2001 representing photo taken during this period) of the independent variable (i.e., date and time the photos were taken, see [0006]) and each have a length proportional to the number of search results items determined to be in the associated bin (e.g., the timeline 250 displays a vertical bar graph with bar heights that are representative of the number of photos taken during a given period of time, see [0031]) and extend perpendicular to the independent variable axis (i.e., histogram bars are vertical while the date and time are displayed horizontally), and wherein the independent variable (i.e., date and time) range covered by the histogram bins associated with bars displayed within each cluster subdivision falls within the independent variable range of that subdivision (see timeline 250 as shown in Fig. 1).

As to claim 2, Rothmuller further teaches comprising displaying a search results counter in the search results window which displays the total number of search results items included in all the cluster subdivisions currently displayed in the graphic data presentation sector (i.e., there are 14 photos were taken on the selected date 12/25/01, see lower right corner of Fig. 1).

As to claim 3, Rothmuller further discloses comprising displaying a list sector in the search results window (i.e., the interface as shown in Fig. 1) which displays a listing of at least some of the search results items included in the cluster subdivisions currently displayed in the graphic data presentation sector (i.e., image area 100 lists the photos found on the selected date 12/25/01).

As to claim 4, Rothmuller further discloses wherein the number of search result items included in the cluster subdivisions currently displayed in the graphic data presentation sector is too large for all of them to be displayed in the space allotted to the list sector in the search results window (e.g., there are 14 photos to be displayed, but the image area 100 is only able to list 4, see Fig. 1), and wherein the search results window further comprises a graphic scroll bar displayed adjacent the list sector which the user employs to bring search results items hidden from view due to the space limitation into view (i.e., vertical scroll bar as seen in Fig. 1, image area 100 is used to bring the other 10 hidden items into view).

As to claim 8, Rothmuller further teaches wherein the list sector (i.e., image area 100 as shown in Fig. 1) is displayed or not displayed in the search results window based on a user-specified preference (i.e., the image area 100 displays items found on the user's selected date 12/25/01, items outside this timeframe are not listed as evidently shown in Fig. 1).

As to claim 10, Rothmuller further teaches comprising displaying a range list (i.e., June 2001 as shown in Fig. 4) in the list sector (i.e., calendar view) of the search results window (i.e., display screen as seen in Fig. 1) comprising a listing of the independent variable range (i.e., May 27, 2001 – July 7, 2001 in the calendar view) and the number of search results items associated with each cluster subdivision currently displayed in the graphic data presentation sector (i.e., 1 photos taken on June 8 and 10 photos taken on June 19, see [0032]).

As to claim 13, Rothmuller further teaches wherein the user-specified independent variable corresponding to a common attribute (i.e., date and time the photos were taken, see [0006]) of at least some of the search results comprises one of (i) a date associated with a search results item (see [0027]), (ii) a search result item type (see [0039]), and (iii) a file size of a search results item (e.g., "2048 x 1280 / 725 KB", see Fig. 2).

As to claim 14, Rothmuller further teaches wherein the process action of displaying the graphic data presentation sector (i.e., display screen as seen in Fig. 1) further comprises an action of displaying a scale for the independent variable (i.e., timeline 250) comprising periodically placed alphanumeric characters and markings (i.e., vertical bars 1998-2001) indicating the value of the independent variable (i.e., bar graphs representing the year) at the location where it is display along the independent variable axis (horizontal axis of the timeline).

As to claim 16, the limitations recited in this claim are the same as the ones addressed in claim 10. Thus claim 16 is analyzed as previously discussed with respect to claim 10 above.

As to claim 18, Rothmuller further teaches wherein the process action of displaying the graphic data presentation sector (i.e., display screen as shown in Fig. 1) further comprises an action of displaying a histogram of the search results items (i.e., histogram timeline 250 as shown in Fig. 1 and Fig. 3), in terms of the user-specified independent variable (i.e., date and time the photos were taken, see [0006]), over the cluster subdivisions (i.e., histogram bar 1998-2001), wherein the bars of the histogram each represent a histogram bin corresponding to a particular range of the independent variable (i.e., bar 2001 representing photo taken during this period) and each have a length proportional to the number of search results items determined to be in the associated bin (e.g., the timeline 250 displays a vertical bar graph with bar heights that are representative of the number of photos taken during a given period of time, see [0031]) and extend perpendicular to the independent variable axis (i.e., histogram bars are vertical while the date and time are displayed horizontally), and wherein the independent variable range covered by the histogram bins associated with bars displayed within each cluster subdivision falls within the independent variable range of that subdivision (see timeline 250 as shown in Fig. 1).

As to claim 22, Rothmuller further teaches comprising displaying an overview sector (i.e., timeline 250 as shown in Fig. 1) in the search results window (i.e., display screen as seen in Fig. 1) comprising continuously displaying an overall clustering computed from the complete set of search results in terms (i.e., vertical bar graphs are displayed along the horizontal axis of the time line 250) of said user-selected independent variable corresponding to a common attribute of at least some of the search results (i.e., date and time the photos were taken, see [0006]).

As to claim 23, Rothmuller further teaches comprising displaying an indicator pane (i.e., the non-shaded portion as shown in Fig. 3) covering the portion of said overall clustering displayed in the overview sector corresponding to the search results items (i.e., the timeline 250 shows the number of photos taken over a period of time such as Jan 98 – today as shown in Fig. 1) used to compute the clustering currently displayed in the graphic data presentation sector (i.e., the time can be used to specify the criteria used to search for matching photos, see [0028]), said indicator pane being visually distinguished from the remaining parts of the overall clustering (i.e., indicator pane is non-shaded while the rest are shaded).

### *Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 19, 34-36, 39, 41-42, 44-45, 49, 52-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothmuller in view of Kang et al (published article, "Visualization Methods for Personal Photo Collections: Browsing and Searching in the PhotoFinder", hereinafter simply referred to as Kang).

As to independent claim 34, Rothmuller teaches

An interactive search results presentation system (apparatus for storing, cataloguing, managing, organizing, finding and displaying objects such as digital images, see [0004], lines 1-3), comprising:

a general purpose computing device (i.e., a computer, see [0011]) comprising a display (i.e., the computer monitor that display the user interface as shown in Fig. 1) and a user interface selection device (i.e., a mouse or keyboard that allows a user to select a command button in the interface of Fig. 1); and

a computer program comprising program modules executable by the computing device (see [0011]), wherein the computing device is directed by the program modules of the computer program ([0011]) to graphically display the results of a search to a user (see [0007]) on said display via an interactive search results window (i.e., image area 100 or timeline 250) in which the user views and filters search results items on the display (i.e., through timeline 250 a user can further filter results item based on the date and time), said search results window (Fig. 1) comprising,

a graphic data presentation sector which displays a histogram of the search results items (i.e., timeline 250) in terms of a user-specified independent variable (i.e., date and time the photos were taken, see [0006]) corresponding to a common attribute (i.e., photo file type) of at least some of the search results (i.e., photos taken between Jan 98 – today, see Fig. 1), wherein the bars of the histogram (i.e., vertical bar 2000-2001 as shown in Fig. 3) each represent a histogram bin corresponding to a particular range (i.e., bar 2001 representing photo taken during this period) of the independent variable (i.e., date and time the photos were taken, see [0006]) and each have a length proportional to the number of search results items determined to be in the associated bin (e.g., the timeline 250 displays a vertical bar graph with bar heights that are representative of the number of photos taken during a given period of time, see [0031]); and a selection pane (i.e., timeline slider pane as shown in Fig. 3) covering a fractional region (i.e., Jan 1998 – today as shown in Fig. 1) of the displayed histogram along the axis of the independent variable (i.e., date and time), said selection pane being visually distinguished from the remaining parts of the histogram and representing a currently highlighted portion of the histogram (i.e., the selection pane is not shaded while the non-selected pane is shaded as evidently shown in Fig. 3); and

However, Rothmuller does not explicitly disclose that upon user-selection of the portion of the histogram highlighted by the selection pane, a new histogram is computed for just those search results items associated with the selected portion of the histogram and displayed in the graphic data presentation sector in lieu of the previously displayed higher-order histogram, thereby effecting a user specified filtering of the search results.

Kang, though, teaches:

wherein upon user-selection of the portion of the histogram highlighted by the selection pane (i.e., clicking on individual histogram bars, see pp. 1541, left column, lines 8-18), a new histogram is computed for just those search results items associated with the selected portion of the histogram and displayed in the graphic data presentation sector in lieu of the previously displayed higher-order histogram (e.g., only pictures with the selected histogram bar value will be shown and query result histograms are updated to reflect the effect of query changes), thereby effecting a user specified filtering of the search results (i.e., a user can click on the histogram bars to further filter the query results).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the functions of dynamic queries and query previews as taught by Kang to the interactive search result system as taught by Rothmuller to give users immediate feedback of the number of hits for the query they are performing so that query parameters can then be adjusted to refine the query and ultimately to prevent users from performing zero-hit queries (see Kang pp. 1541, left column, lines 24-27).

As to claim 19, Rothmuller teaches the limitation of claim 18 for the reasons as discussed with respect to claim 18 above. However, Rothmuller fails to disclose that wherein whenever the user selects one of the cluster subdivisions via said selection device, the process action of displaying a histogram of the search results items comprises an action of displaying a new histogram computed for just those search results items associated with the selected cluster subdivision which is displayed in the graphic data presentation sector in lieu of the previously displayed higher-order histogram. Kang, though, teaches wherein whenever the user selects one of the cluster subdivisions via said selection device (i.e., clicking on individual histogram bars, see pp. 1541, left column, lines 8-18), the process action of displaying a histogram of the search results items comprises an action of displaying a new histogram computed for just those search results items associated with the selected cluster subdivision which is displayed in the graphic data presentation sector in lieu of the previously displayed higher-order histogram (e.g., only pictures with the selected histogram bar value will be shown and query result histograms are updated to reflect the effect of query changes). Thus combining Rothmuller and Kang would meet the claimed limitation for the same reasons as discussed with respect to claim 34 above.

As to claim 35, the limitations recited in this claim are the same as the ones addressed in claim 13. Thus claim 35 is analyzed as previously discussed with respect to claim 13 above.

As to claim 36, Rothmuller and Kang teach the limitation of claim 34 for the reasons as discussed with respect to claim 34 above. Rothmuller further teaches wherein the length of the bars (i.e., the height of the bars 1999-2001 as shown in Fig. 3) of the histogram (i.e., timeline 250) are scaled such that the bar representing the histogram bin having the most search results items extends a prescribed maximum length (e.g., see [0031]) perpendicular to the independent variable (i.e., date and time the photos were taken, see [0006]) axis of the histogram (i.e., the vertical bars 1999-2001 are perpendicular to the horizontal axis of the timeline 250) and the length of the other bars is scaled proportionally depending on the number of search results items in the bar's associated histogram bin (see e.g., [0032] lines 11-17).

As to claim 39, Rothmuller and Kang teach the limitation of claim 34 for the reasons as discussed with respect to claim 34 above. Rothmuller further teaches wherein the space allotted for the display of the graphic data presentation sector within the search results window dictates the resolution of the histogram (e.g., the more the number of vertical bars are displayed, the lower the resolution of the histogram will be, see [0032]).

As to claim 41, Rothmuller and Kang teach the limitation of claim 39 for the reasons as discussed with respect to claim 39 above. Rothmuller further teaches wherein the length of each histogram bar (i.e., the height of the vertical bars as shown in Fig. 3) is determined in increments representing a particular number of search results items (i.e., normalized number of photos taken during a period, see [0031]) wherein the number of search results items in the histogram bin represented by a bar is divided by the number associated with the bar increment (i.e., average number) to determine the number of increments to be used to display the bar (i.e., bar heights represent of the number of photos taken duding a given period of time normalized to the average number of photos taken during all such similar periods of time in the database).

As to claim 42, Rothmuller and Kang teach the limitation of claim 41 for the reasons as discussed with respect to claim 41 above. Rothmuller further teaches wherein whenever said division (i.e., average number, see [0031]) results in a remainder (i.e., a situation when an odd number of photo taken is divided by date range such as 31 photos is divided by 12 months), the number of increments used to display a bar is one of (i) rounded down, (ii) rounded up, (iii) rounded up if the remainder is more than half the number associated with the bar increments and rounded down if the remainder is equal to or less than half the number associated with the bar increments, or (iv) rounded up if the remainder is equal to or more than half the number associated with the bar increments and rounded down if the remainder is less than half the number associated with the bar increments (i.e., as well known in the art, rounding-up and rounding-down functions are used to calculate average or normalized numbers). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the math functions of rounding-up and rounding-down to the calculation of average or normalized as taught by Rothmuller to display the vertical bars of the histogram proportionally (see Rothmuller [0031]).

As to claim 44, Rothmuller and Kang teach the limitation of claim 34 for the reasons as discussed with respect to claim 34 above. Rothmuller further teaches wherein the search results window further comprises a list sector which displays a listing of search results items included in the bins of the histogram currently displayed in the graphic data presentation sector (i.e., image area 100 lists the photos found on the selected date 12/25/01).

As to claim 45, Rothmuller and Kang teach the limitation of claim 44 for the reasons as discussed with respect to claim 44 above. Rothmuller further teaches wherein the number of search result items included in the bins of the histogram currently displayed in the graphic data presentation sector is too large for all of them to be displayed in the space allotted to the list sector in the search results window (e.g., there are 14 photos to be displayed, but the image area 100 is only able to list 4, see Fig. 1), and wherein the search results window further comprises a graphic scroll bar displayed adjacent the list sector which the user employs to bring search results items hidden from view due to the space limitation into view (i.e., vertical scroll bar as seen in Fig. 1, image area 100 is used to bring the other 10 hidden items into view).

As to claim 49, the limitations recited in this claim are the same as the ones addressed in claim 8. Thus claim 49 is analyzed as previously discussed with respect to claim 8 above.

As to claim 52, Rothmuller and Kang teach the limitation of claim 34 for the reasons as discussed with respect to claim 34 above. Rothmuller further teaches wherein the size of the fractional region associated with the selection pane along the independent variable axis is prescribed (i.e., the size of the adjustable bands 251 as seen in Fig. 3).

As to claim 53, Rothmuller and Kang teach the limitation of claim 52 for the reasons as discussed with respect to claim 52 above. Rothmuller further teaches wherein the prescribed size of the fractional region along the independent variable axis amounts to 25 percent of the overall length of the histogram currently displayed in the graphic data presentation sector (i.e., the width of the adjustable bands is less than 25% of the overall length of the horizontal size of the histogram 250 as shown in Fig. 3).

As to claim 54, Rothmuller and Kang teach the limitation of claim 34 for the reasons as discussed with respect to claim 34 above. Rothmuller further teaches wherein the selection pane is moved along the independent variable axis of the histogram by the user to highlight a desired portion thereof (i.e., the users can move the adjustable bands 251 along the horizontal axis of the histogram 250 to select a date range as shown in Fig. 3).

As to claim 55, Rothmuller and Kang teach the limitation of claim 34 for the reasons as discussed with respect to claim 34 above. Kang further teaches wherein the user continues to select a portion of the currently-displayed histogram (i.e., the users move the slider bars closer to the year 1992 as shown in Fig. 2, pp. 1541) highlighted by the selection pane each time a previous selection (i.e., the selection portion 1991-1992 is highlighted) has resulted in a new histogram being computed for just those search results items associated with the selected portion of the histogram and displayed in the graphic data presentation sector (see pp. 1541, left column, lines 8-20). Thus combining Rothmuller and Kang would meet the claimed limitation for the same reasons as discussed with respect to claim 34 above.

As to claim 56, Rothmuller and Kang teach the limitation of claim 34 for the reasons as discussed with respect to claim 34 above. Rothmuller further discloses wherein said search results window (i.e., display window as shown in Fig. 1) further comprises an overview sector (i.e., the area where the timeline 250 is displayed) , wherein the overview sector continuously displays an overall histogram computed from the complete set of search results in terms (i.e., histogram 250 displays all photos taken between Jan 98 – today, see Fig. 1) of said user-selected independent variable corresponding to a common attribute (i.e., date and time of the photos) of at least some of the search results (image or photos).

As to claim 57, the limitations recited in this claim are the same as the ones addressed in claim 23. Thus claim 57 is analyzed as previously discussed with respect to claim 57 above.

9. Claims 5-7, 11, 17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothmuller in view of Hooper et al (Pub. No US 2005/0044066 A1 hereinafter simply referred to as Hooper).

As to claim 5, Rothmuller teaches the limitation of claim 3 for the reasons as discussed with respect to claim 3 above. Rothmuller further discloses the search results items comprise electronic files (i.e., digital media such as video files, audio files, photo slide shows, and photo albums, see [0039]). However, Rothmuller does not disclose that said listing of the search results items comprises a listing of file names associated with each of the files. Hooper, though, discloses said listing of the search results items comprises a listing of file names associated with each of the files (i.e., files name such as 1998-02-001.JPG as seen in Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the functions of listing the file names associated with each of the files as taught by Hooper to the interactive search result system as taught by Rothmuller to provide the user the ability to easily track as well as to be able to efficiently access the search results items (see Hooper [0003]).

As to claim 6, Rothmuller teaches the limitation of claim 3 for the reasons as discussed with respect to claim 3 above. Rothmuller further discloses the search results items comprise electronic files (i.e., digital media such as video files, audio files, photo slide shows, and photo albums, see [0039]). However, Rothmuller does not teach listing of the search results items comprises a listing of file names and one or more attributes associated with each of the files. Hooper, though, discloses said listing of the search results items comprises a listing of file names (i.e., files name such as 1998-02-001.JPG as seen in Fig. 1) and one or more attributes associated with each of the files (i.e., file type and image size such as shown in Fig. 1). Thus combining Rothmuller and Hooper would meet the claimed limitation for the same reasons as discussed with respect to claim 5 above.

As to claim 7, Rothmuller teaches the limitation of claim 3 for the reasons as discussed with respect to claim 3 above. Rothmuller further discloses the search results items comprise electronic image files (i.e., images or photos, see [0004]). However, Rothmuller fails to explicitly teach that listing of the search results items comprises a listing of file names and a thumbnail image representative of the image data of the file. Hooper, though, discloses said listing of the search results items comprises a listing of file names and a thumbnail image representative of the image data of the file (see Fig. 2). Thus combining Rothmuller and Hooper would meet the claimed limitation for the same reasons as discussed with respect to claim 5 above.

As to claim 11, Rothmuller teaches the limitation of claim 3 for the reasons as discussed with respect to claim 3 above. However, Rothmuller fails to disclose the process action of displaying the range list comprises an action of visually distinguishing each listing in the same way as the cluster subdivision associated therewith is distinguished in the graphic data presentation sector. Hooper, though, teaches the process action of displaying the range list (i.e., pane 110 as shown in Fig. 1) comprises an action of visually distinguishing each listing in the same way as the cluster subdivision associated therewith is distinguished in the graphic data presentation sector (i.e., the selected date range 1997 is highlighted while the rest of the listings are not highlighted). Thus combining Rothmuller and Hooper would meet the claimed limitation for the same reasons as discussed with respect to claim 5 above.

As to claim 17, the limitations recited in this claim are the same as the ones addressed in claim 11. Thus claim 17 is analyzed as previously discussed with respect to claim 11 above.

As to claim 21, Rothmuller teaches the limitation of claim 1 for the reasons as discussed with respect to claim 1 above. However, Rothmuller does not explicitly disclose a process action of the user continuing to select a cluster subdivision of the currently-displayed clustering each time a previous selection has resulted in a new clustering being computed for just those search results items associated with the selected subdivision and displayed in the graphic data presentation sector. Hooper, though, teaches a process action of the user continuing to select a cluster subdivision of the currently-displayed clustering (i.e., the user can selects any year clusters 1997-2003, see Fig. 1, item 110) each time a previous selection has resulted in a new clustering being computed for just those search results items associated with the selected subdivision and displayed in the graphic data presentation sector (i.e., the user right click on the year 1997 resulting in the list of months being displayed; note that Jan has 49 items corresponding to the number of items displayed in year 1997). Thus combining Rothmuller and Hooper would meet the claimed limitation for the same reasons as discussed with respect to claim 5 above.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rothmuller in view of Barros (Patent No US 7,036,085 B2; hereinafter simply referred to as Barros).

As to claim 9, Rothmuller teaches the limitation of claim 8 for the reasons as discussed with respect to claim 8 above. However, Rothmuller fails to disclose display button in the search results window which when selected by the user when the list sector is displayed causes the list sector to be hidden from view, and which when selected by the user when the list sector is hidden from view causes the list sector to be displayed. Barros, though, discloses display button (i.e., "Plant Species" check box as shown in Fig. 7fg) in the search results window (i.e., display screen as seen in Fig. 7fg) which when selected by the user when the list sector is displayed causes the list sector to be hidden from view (i.e., the list can be hidden by clicking on the "Plant Species" key label, see col. 19, lines 13-14), and which when selected by the user when the list sector is hidden from view causes the list sector to be displayed (i.e., the list can be recalled by clicking on the "Plant Species" key label, see col. 19, lines 13-14 and Fig. 7fg). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the function of toggling button as taught by Barros to the search results window as taught by Rothmuller so that only the set of material of interest at the moment is viewed, without distraction of irrelevant information; and thus obtain a better space management (see Barros col. 19, lines 1-4 and Fig. 7fg).

11. Claims 12, 20, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothmuller in view of SciFinder Scholar ("SciFinder Scholar 2001 User Guide", hereinafter simply referred to as SciFinder).

As to claim 12, Rothmuller teaches the limitation of claim 10 for the reasons as discussed with respect to claim 10 above. However, Rothmuller fails to teach at any one time either the range list or the listing of search results items is displayed in the list sector, but not both, and wherein the user specifies which is to be displayed. SciFinder, though, teaches at any one time either the range list (i.e., "Histogram Entries of interest" figure as shown in section 7-6) or the listing of search results items (figure as seen in section 7-2) is displayed in the list sector (i.e., SciFinder display area, see figure in section 7-2), but not both, and wherein the user specifies which is to be displayed (it is noted that upon the user selects "Analyze or Refine References" from the listing of search results items, the histogram will be displayed; on the other hand, while the histogram listing is displayed, the user can select "Get References" to display the listing of search results items). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the function of displaying either the range list or the listing of results items as taught by SciFinder to the search results window as taught by Rothmuller to allow a user to narrow a search by adding more filters to the original search criteria, and thus to help search quicker (see SciFinder section 7-7, lines 8-9).

As to claim 20, Rothmuller teaches the limitation of claim 18 for the reasons as discussed with respect to claim 18 above. However, Rothmuller fails to teach that the histogram can be displayed or hidden from view. SciFinder, though, teaches wherein the user can specify whether the histogram is displayed (i.e., the histogram can be displayed when the user selects "Analyze or Refine Reference", see section 7-2) or hidden from view (i.e., the histogram can be hidden from view when the user select one ore more histograms can click "Get References", see section 7-6). Thus combining Rothmuller and SciFinder would meet the claimed limitation for the same reasons as discussed with respect to claim 12 above.

As to claim 30, Rothmuller teaches the limitation of claim 3 for the reasons as discussed with respect to claim 3 above. However, Rothmuller fails to teach that the process action of displaying the list sector comprises an action of displaying search results items in acsending order in regard to the independent variable, and in one of columns or rows, on a cluster subdivision-by-subdivision basis, such that each successive column or row associated with a particular subdivision displays as many search results items as will fit in the space allotted for a respective full column or row in the list sector or as many search result items as there are left in the subdivision which are not displayed in a preceding column or row. SciFinder, though, teaches the process action of displaying the list sector (display window on section 7-6) comprises an action of displaying search results items in ascending order (i.e., the items that has more hits are displayed on top of lower hits items) in regard to the independent variable (i.e., search item are displayed in the order based on number of hits, see figure on section 7-6), and in one of columns or rows (i.e., number of hits displayed in last column of every rows as shown in the figure of section 7-6), on a cluster subdivision-by-subdivision basis (items are grouped into categories such as author name), such that each successive column or row associated with a particular subdivision displays as many search results items as will fit in the space allotted for a respective full column or row in the list sector (note display window displays search items as much and as wide as it can, see second figure on section 7-8) or as many search result items as there are left in the subdivision which are not displayed in a preceding column or row (it is noted that result items list can be sorted by alphabetically or by frequency, see section 7-5). Thus combining Rothmuller and SciFinder would meet the claimed limitation for the same reasons as discussed with respect to claim 12 above.

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rothmuller in view of Nygaard, Jr. (Patent No US 6,760,676 B2, hereinafter simply referred to as Nygaard).

As to claim 15, Rothmuller teaches the limitation of claim 1 for the reasons as discussed with respect to claim 1 above. Rothmuller further teaches wherein the proportional length of said subdivisions is based on one of (i) linear proportionality (see timeline 250 as shown in Fig. 3). However, Rothmuller fails to explicitly teach that proportional length of said subdivisions is based on logarithmic proportionality. Nygaard, though, discloses proportional length of said subdivisions is based on (ii) logarithmic proportionality (see Fig. 19, item 82(b) and 83). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the function of displaying proportional length based on logarithmic proportionality as taught by Nygaard to the search results window as taught by Rothmuller to accurately know the time along the histogram's time axis especially when there are a lot of subdivisions to be display (see Nygaard col. 15, lines 1-6).

13. Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothmuller in view of Wroblewski et al (Patent No 5,339,391; hereinafter simply referred to as Wroblewski).

As to claim 24, Rothmuller teaches the limitation of claim 3 for the reasons as discussed with respect to claim 3 above. Rothmuller further teaches displaying a guide pane over a fractional region (i.e., adjustable bands 251 as shown in Fig. 3) of the displayed cluster subdivisions (i.e., vertical bars 1998-2001) along the axis of the independent variable (horizontal axis of the timeline), said guide pane being visually distinguished from the cluster subdivisions (the adjustable bands are thinner than the vertical bars 1998-2001). However, Rothmuller fails to explicitly teaches that the guide pane is transparent to allow the cluster subdivisions to be seen through the guide pane and representing a currently highlighted portion of the search result items corresponding to the cluster subdivisions covered thereby; displaying a highlighting pane over at least a portion of the search results items listed in said list sector, wherein the highlighting pane is visually distinguished from the listed search results items in a manner that allows the items to be seen through the highlighting pane, and wherein the search result items covered by the highlighting pane correspond to the search result items associated with the cluster subdivision or subdivisions or parts thereof covered by the guide pane. Wroblewski, though, teaches that the guide pane (i.e., car 17 as shown in Fig. 1) is transparent to allow the cluster subdivisions to be seen through the guide pane (i.e., through car 17, the users can see attribute indicia 18, 19) representing a currently highlighted portion of the search result items corresponding to the cluster subdivisions covered (note that attribute indicia 18 and 19 indicate the position of significant attributes within the data file, see col. 2, lines 56-60) thereby; displaying a highlighting pane (i.e., highlighted rectangle over the item "ist", see Fig. 1) over at least a portion of the search results items (item "ist") listed in said list sector (window 12), wherein the highlighting pane is visually distinguished from the listed search results items (i.e., shaded versus non-shaded) in a manner that allows the items to be seen through the highlighting pane (the user can see the item through the highlighted pane such as "ist"), and wherein the search result items covered by the highlighting pane correspond to the search result items associated with the cluster subdivision or subdivisions or parts thereof covered by the guide pane (see col. 2, lines 59-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used attribute enhanced scroll bar as taught by Wroblewski to the search results window as taught by Rothmuller to allow the users to navigate easily through the file (see Wroblewski col. 2, lines 1-7).

As to claim 25, Rothmuller and Wroblewski teach the limitation of claim 24 for the reasons as discussed with respect to claim 24 above. Wroblewski further discloses wherein the process action of displaying a highlighting pane (i.e., highlighted pane over items "taxonomy" as shown in Fig. 2) comprises an action of displaying the highlighting pane in a manner similar to the way the guide pane is visually distinguished from the cluster subdivision so as to indicate to the user that the guide pane and highlighting pane are related (i.e., car 17 is currently covered three items 18, highlighting pane cover 3 result item in the list sector, see Fig. 2). Thus combining Rothmuller and Wroblewski would meet the claimed limitation for the same reasons as discussed with respect to claim 24 above.

As to claim 26, Rothmuller and Wroblewski teach the limitation of claim 24 for the reasons as discussed with respect to claim 24 above. Wroblewski further discloses wherein the size of the fractional region associated with the guide pane along the independent variable axis is large enough to encompass all the search result items that are able to be displayed in the list sector in view of the space allotted the list sector (note that car 17 is large enough to cover all three search result items that are able to be displayed in window 12, see Fig. 2 and Fig. 1). Thus combining Rothmuller and Wroblewski would meet the claimed limitation for the same reasons as discussed with respect to claim 24 above.

As to claim 27, Rothmuller and Wroblewski teach the limitation of claim 24 for the reasons as discussed with respect to claim 24 above. Wroblewski further teaches wherein the size of the fractional region associated with the guide pane along the independent variable axis is not large enough to encompass all the search result items that are displayed in the list sector, thereby resulting in the highlighting pane covering only a portion of the search results items being displayed in the list sector (note that car 17 is not large enough to cover all search result items currently displayed in window 12, thus the highlighting pane only covers a portion of the items, see Fig. 1). Thus combining Rothmuller and Wroblewski would meet the claimed limitation for the same reasons as discussed with respect to claim 24 above.

14. Claims 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothmuller in view of Kang and further in view of Nygaard.

As to claim 37, Rothmuller and Kang teach the limitation of claim 36 for the reasons as discussed with respect to claim 36 above. However, Rothmuller and Kang do not explicitly disclose that the prescribed maximum length of the histogram bars is the entire extent of the graphic data presentation sector in the direction perpendicular to its independent variable axis. Nygaard, however, teaches wherein the prescribed maximum length of the histogram bars (see histogram bar 81(b) as shown in Fig. 17) is the entire extent of the graphic data presentation sector in the direction perpendicular to its independent variable axis (note that the bar 81(b) extends all the way up to the vertical area allotted for the histogram). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the function of displaying proportional length based on logarithmic proportionality as taught by Nygaard to the search results window as taught by Rothmuller as modified by Kang to accurately know the time along the histogram's time axis especially when there are a lot of subdivisions to be display (see Nygaard col. 15, lines 1-6).

As to claim 38, the limitations recited in this claim are the same as the ones addressed in claim 15. Thus claim 38 is analyzed as previously discussed with respect to claim 15 above.

15. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rothmuller in view of Kang and further in view of SciFinder.

As to claim 43, Rothmuller and Kang teach the limitation of claim 34 for the reasons as discussed with respect to claim 34 above. However, Rothmuller and Kang do not explicitly disclose a search results counter which displays the total number of search results items included in all the bins of the histogram currently displayed in the graphic data presentation sector. SciFinder, however, teaches wherein the search results window (window "Author Name Analysis" as shown in section 7-6) further comprises a search results counter (Histogram Entries 1-12 of 439) which displays the total number of search results items (number 439) included in all the bins of the histogram (12 bins total) currently displayed in the graphic data presentation sector (frame that contains histogram). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the function of displaying the total number of item currently displayed in a histogram as taught by SciFinder to the search results window as taught by Rothmuller as modified by Kang to allow the users to see a visual representation of the answer set based on frequency and thus help them drill down to smaller set of items (see SciFinder section 7-4).

16. Claims 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothmuller in view of Kang and further in view of Hooper.

As to claim 46, Rothmuller and Kang teach the limitation of claim 44 for the reasons as discussed with respect to claim 44 above. Rothmuller further discloses the search results items comprise electronic files (i.e., digital media such as video files, audio files, photo slide shows, and photo albums, see [0039]). However, Rothmuller and Kang do not disclose that said listing of the search results items comprises a listing of file names associated with each of the files. Hooper, though, discloses said listing of the search results items comprises a listing of file names associated with each of the files (i.e., files name such as 1998-02-001.JPG as seen in

Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the functions of listing the file names associated with each of the files as taught by Hooper to the interactive search result system as taught by Rothmuller as modified by Kangto provide the user the ability to easily track as well as to be able to efficiently access the search results items (see Hooper [0003]).

As to claim 47, the limitations recited in this claim are the same as the ones addressed in claim 6. Thus claim 47 is analyzed as previously discussed with respect to claim 6 above.

As to claim 48, the limitations recited in this claim are the same as the ones addressed in claim 7. Thus claim 48 is analyzed as previously discussed with respect to claim 7 above.

17. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rothmuller in view of Kang and further in view of Barros.

As to claim 50, Rothmuller and Kang teach the limitation of claim 49 for the reasons as discussed with respect to claim 49 above. However, Rothmuller and Kang fail to disclose display button in the search results window which when selected by the user when the list sector is displayed causes the list sector to be hidden from view, and which when selected by the user when the list sector is hidden from view causes the list sector to be displayed. Barros, though, discloses display button (i.e., "Plant Species" check box as shown in Fig. 7fg) in the search results window (i.e., display screen as seen in Fig. 7fg) which when selected by the user when the list sector is displayed causes the list sector to be hidden from view (i.e., the list can be hidden by clicking on the "Plant Species" key label, see col. 19, lines 13-14), and which when selected by the user when the list sector is hidden from view causes the list sector to be displayed (i.e., the list can be recalled by clicking on the "Plant Species" key label, see col. 19, lines 13-14 and Fig. 7fg). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the function of toggling button as taught by Barros to the search results window as taught by Rothmuller as modified by Kang so that only the set of material of interest at the moment is viewed, without distraction of irrelevant information; and thus obtain a better space management (see Barros col. 19, lines 1-4 and Fig. 7fg).

18. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rothmuller in view of Kang and further in view of Ubillos (Paten No US 6,486,896 B1; hereinafter simply refer to as Ubillos).

As to claim 51, Rothmuller and Kang teach the limitation of claim 34 for the reasons as discussed with respect to claim 34 above. However, Rothmuller and Kang do not explicitly teach further teaches the size of the fractional region associated with the selection pane along the independent variable axis is user specified. Ubillos, though, teaches wherein the size of the fractional region associated with the selection pane along the independent variable axis is user specified (i.e., by placing a cursor on scale controller 17 and click-dragging to the left, the scale of timeline 14 increase, see Fig. 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the function of allowing the selection pane to be adjustable as taught by Ubillos to the search results window as taught by Rothmuller as modified by Kang to increase the amount of time covered by the timeline increase (see Ubillos col. 6, lines 25-30).

19. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rothmuller in view of Kang and further in view of Microsoft Powpperpoint 2000 chart tool (screen capture made from PowerPoint 2000 using chart tool 2000; hereinafter simply refer to as Powerpoint).

As to claim 40, Rothmuller teaches the limitation of claim 39 for the reasons as discussed with respect to claim 39 above. However, Rothmuller and Kang do not explicitly disclose that the number of bars in the histogram and the independent variable range of the bin associated with each bar is dictated by the length of the displayed graphic data presentation sector in the direction of the independent variable axis of the histogram in that the maximum number of bars having a prescribed width in the direction of the independent variable axis that can be displayed are displayed with each bin represented by a bar having an independent variable range equal to a total range of the independent variable associated with the search results items divided by the number of bars displayed. Powerpoint, though, teaches wherein the number of bars in the histogram (i.e., number of vertical bars as shown in upper left chart of page 1) and the independent variable range of the bin associated with each bar (i.e., the width of the vertical bars) is dictated by the length of the displayed graphic data presentation sector (it is noted that when the presentation sector is resized to smaller size, the width of the vertical bars is smaller, see the chart in the lower right of page 3) in the direction of the independent variable axis (i.e., Jan – Apr) of the histogram (i.e., the bar chart) in that the maximum number of bars having a prescribed width (e.g., proportional width of the bars stay the same) in the direction of the independent variable axis (horizontal axis of the bar chart) that can be displayed are displayed with each bin represented by a bar having an independent variable range equal (each bin represents 1 month) to a total range of the independent variable associated with the search results items divided by the number of bars displayed (i.e., the total range is from Jan – April, each bar range represents 1 month). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the function of proportionally resizing the size of the bar graph as taught by Powerpoint to the search results window as taught by

Rothmuller as modified by Kang to always maintain the proportion of the bars regardless of the size of date presentation sector (see Powerpoint page 1).

## *Allowable Subject Matter*

20. Claims 28-29 and 31-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

## *Response to Arguments*

21. Applicant's arguments filed 12/28/06 have been fully considered but they are not persuasive.

I. Applicant's argument that Rothmuller does not teach the subdivision has a length along the axis of the independent variable proportional to the number of search results items within that subdivision (see remark page 2 lines 14-21 and page 3 lines 1-7).

The Examiner respectfully disagrees.

Rothmuller clearly teaches the subdivision has a length along the axis of the independent variable proportional to the number of search results items within that subdivision (e.g., see Fig. 3 and [0031]). For a clearer explanation, please see a captured image of Fig. 3 below.

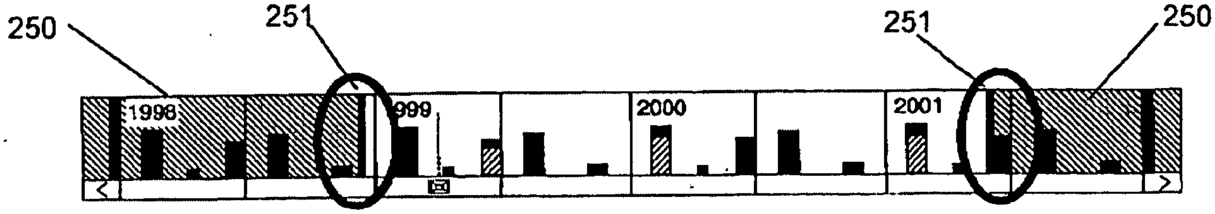


Fig. 3

II. Applicant's argument that the prior art fails to teach every element of the claims.

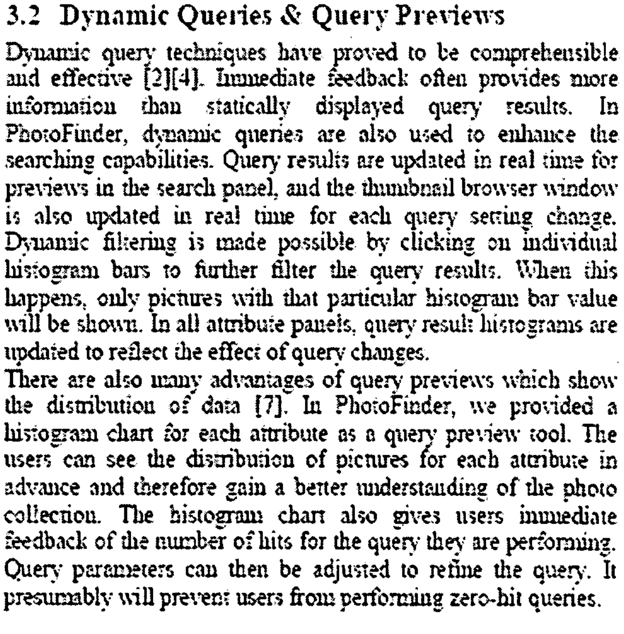
Applicant argues that the office action has not established a prima facie case of obviousness because the cited references do not teach all the claimed elements; especially, Applicant argues that Rothmuller lacks a teaching of a cluster subdivision where each subdivision is visually distinguished from the other subdivisions and has a length along the axis of the independent variable proportional to the number of search results items within that subdivision (see remark page 3 lines 15-25 and remark page 4 lines 17-27).

The Examiner respectfully disagrees for the same reasons as discussed with respect to the argument I.

III. Applicant argues that the cited references do not teach upon user-selection of the portion of the histogram highlighted by a selection pane, a new histogram is computed for just those search results items associated with the selected portion of the histogram. The new histogram is then displayed in the graphic data presentation sector in lieu of the previously displayed higher-order histogram (see remark page 6 second paragraph lines 8-13). Applicant further argues that the examiner misinterprets and appears to be erroneously reading the Kang reference (see remark page 6 third paragraph and remark page 7 paragraph 4) and that Kang reference does not teach re-histogramming (e.g., see remark page 7 paragraph 5).

The Examiner respectfully disagrees.

Kang teaches a dynamic query technique wherein query results are updated in real time for previews in the search panel, and the thumbnail browser window is also updated in real time for each query setting change; dynamic filtering is made possible by clicking on individual histogram bars to further filter the query results; when this happens, only pictures with that particular histogram bar value will be shown. In all attribute, **query result histograms are updated to reflect the effect of query changes**. (see Kang pp 1541, left column) .... Kang further teaches that the **histogram chart also gives users immediate feedback of the number of hits for the query they are performing** (see Kang pp. 1541 left column). For that reasons, the examiner concludes that Kang reference teaches re-histogramming technique and that upon user-selection of the portion of the histogram highlighted by a selection pane, a new histogram is computed for just those search results items associated with the selected portion of the histogram. The new histogram is then displayed in the graphic data presentation sector in lieu of the previously displayed higher-order histogram. For a clearer explanation, please see a captured image of Kang's teaching.



### 3.2 Dynamic Queries & Query Previews

Dynamic query techniques have proved to be comprehensible and effective [2][4]. Immediate feedback often provides more information than statically displayed query results. In PhotoFinder, dynamic queries are also used to enhance the searching capabilities. Query results are updated in real time for previews in the search panel, and the thumbnail browser window is also updated in real time for each query setting change. Dynamic filtering is made possible by clicking on individual histogram bars to further filter the query results. When this happens, only pictures with that particular histogram bar value will be shown. In all attribute panels, query result histograms are updated to reflect the effect of query changes.

There are also many advantages of query previews which show the distribution of data [7]. In PhotoFinder, we provided a histogram chart for each attribute as a query preview tool. The users can see the distribution of pictures for each attribute in advance and therefore gain a better understanding of the photo collection. The histogram chart also gives users immediate feedback of the number of hits for the query they are performing. Query parameters can then be adjusted to refine the query. It presumably will prevent users from performing zero-hit queries.

IV. Applicant's argument that the prior art fails to teach every element of the claims.

Applicant argues that the office action has not established a prima facie case of obviousness because the cited references do not teach all the claimed elements; especially, Applicant argues that the cited combination lacks a teaching of the applicants' claimed re-histogramming feature (see remark page 8 second paragraph and remark page 9 paragraph 5) and that that the cited references do not teach upon user-selection of the portion of the histogram highlighted by a selection pane, a new histogram is computed for just those search results items associated with the selected portion of the histogram and displayed in the graphic data presentation sector in lieu of the previously displayed higher-order histogram (see remark page 9 second paragraph 4).

The Examiner respectfully disagrees for the same reasons as discussed with respect to the above argument III.

## *Conclusion*

22. **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TuyetLien (Lien) T. Tran whose telephone number is 571-270-1033. The examiner can normally be reached on Mon-Friday: 7:30 - 5:00 (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

T.T
2/9/2007

Lien Tran
Examiner
Art Unit 2179

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PRIMARY EXAMINER